



EFFECTIVENESS OF LIGATING UTERINE ARTERY AND ITS DESCENDING BRANCH IN CASES OF PLACENTA PRAEVI

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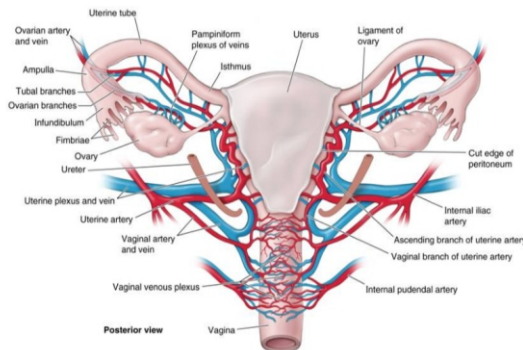
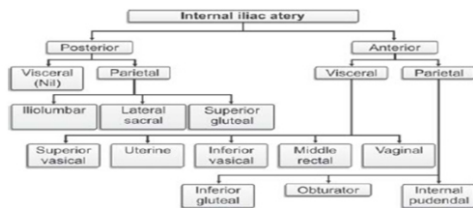
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ABSTRACT

To control bleeding from the placental bed in cases of placenta previa is a challenging problem to the attending obstetrician. In GGH Kurnool over a period of 1 year (JAN-DEC 2016) 44 cases of placenta praevia were admitted. 7 cases delivered vaginally, 37 were operated for intractable bleeding. Various methods like applying pressure over placental bed, placental bed suturing, uterine artery ligation, ligation of descending branch of uterine artery, ligation of internal iliac artery & hysterectomy were attempted to arrest bleeding. Ligation of descending branch of uterine artery proved to be effective to control haemorrhage from placental bed.

KEYWORDS : Placenta praevia, uterine artery ligation

INTRODUCTION: Placenta previa is one of the dreadful pregnancy specific complications of antepartum haemorrhage. Blood supply to genital tract is from anterior branch of internal iliac artery. Its branches are



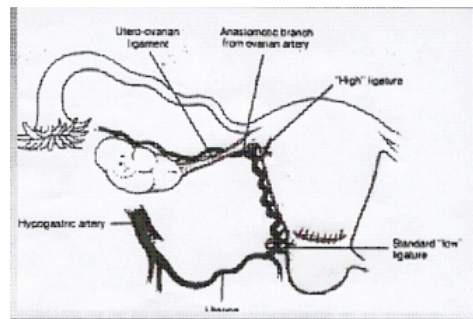
During pregnancy, there is marked hypertrophy of the uterine vasculature, which is supplied principally from the uterine and ovarian arteries. The uterine artery, a main branch of the internal iliac artery (hypogastric artery) enters the base of the broad ligament and makes its way medially to the side of the uterus. Once the uterine artery has reached the supravaginal portion of the cervix, it divides. The smaller cervicovaginal artery supplies blood to the lower cervix and upper vagina. The main branch turns abruptly upward and extends as a highly convoluted vessel that traverses along the lateral margin of the uterus. A branch of considerable size extends into the upper portion of the cervix, whereas numerous other branches penetrate the body of the uterus to form the arcuate arteries. These encircle the organ by coursing within the myometrium just beneath the serosal surface. Just before the main uterine artery vessel reaches the fallopian tube, it divides into three terminal branches. The ovarian branch of the uterine artery forms an anastomosis with the terminal branch of the ovarian artery; the tubal branch makes its way through the mesosalpinx and supplies part of the fallopian tube; and the fundal branch penetrates the uppermost uterus.

Intractable genital tract bleeding occurs sometimes in cases of

placenta previa, cervical tears, cervical pregnancy, atonic PPH, LSCS. In such cases, devascularisation is attempted by bilateral uterine artery ligation, internal iliac artery ligation & hysterectomy done as last resort to arrest bleeding.

Placenta previa is one of the causes of APH next to abruptio placenta with an incidence of 4-5 per 1000 pregnancies leading to haemorrhagic shock, maternal morbidity & mortality if blood loss is not adequately met with enough number of blood transfusions. In cases of placenta previa, applying pressure & suturing of placental bed is carried out before attempting above mentioned procedures.

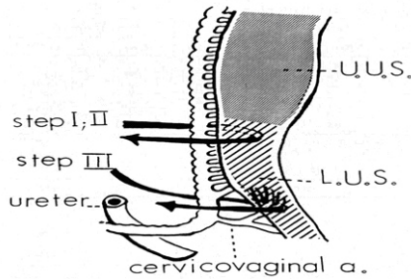
Uterine artery ligation is the simplest major vessel ligation & may be effective for uterine haemorrhage. When haemorrhage is from the body of uterus, ligation of ascending branch of uterine artery along with ovarian artery is done. For bleeding from lower uterine segment, cervix & paracolpos, ligation of descending branch of uterine artery is carried out.



The uterus should be elevated out of the abdominal incision and the fundus tilted away from the side to be ligated. Using a round body needle with No. 0 or 1 absorbable suture the needle is passed through the myometrium from anterior to posterior, about 2cms. medial to the lateral edge of the uterus. The suture is then brought back through an avascular space in the broad ligament & tied. Including a good cushion of myometrium ensures inclusion of all branches of the uterine vessels & helps stabilise the ligature. The suture is placed approximately 2-3cms. below a low transverse caesarean incision.

It is important to ensure that the bladder is well away from the placement of the suture to avoid ureteric or bladder injury. The procedure is repeated on the other side.

This procedure is simple, safe useful & rapid method for the arrest of bleeding from placental bed in cases of central placenta previa.



MATERIALS & METHODS:

In GGH Kurnool over a period of 1 year (JAN-DEC 2016) 44 cases of placenta praevia were admitted. 7 cases delivered vaginally (type 1 & 2) had minimal bleeding, 37 were operated for intractable bleeding. Among them 27 were central placenta praevia, 10 were type 1 & 2. In 14 cases there was no bleeding. In others various methods like applying pressure & suturing of placental bed, suturing bilateral descending branches of uterine artery were attempted to arrest bleeding from placental bed.

RESULTS:

INCIDENCE

Total No. of deliveries	No. of placenta praevia cases	Incidence
8896	44	0.4%(1 in 202)

INCIDENCE OF LSCS

Total cases of LSCS	LSCS for placenta praevia	Incidence
2194	37	0.01%(1 in 100)

INCIDENCE OF VAGINAL DELIVERIES

Total number of vaginal deliveries	Vaginal delivery in placenta praevia	Incidence
6702	7	0.001%(1 in 1000)

Bleeding from placental bed

	No. of cases	Incidence
Bleeding present	30	68.18%
Bleeding absent	14	31.81%

METHODS ADOPTED TO ARREST BLEEDING FROM PLACENTAL BED IN CENTRAL PLACENTA PREVIA

S.no.	Method	No. of cases	Percentage
1.	No procedure required	14	31.81%
2.	Applying pressure & packing	5	11.36%
3.	Suturing placental bed	4	9.09%
4.	Low ligation of uterine artery	7	15.9%
5.	Ligating descending branch of uterine artery long with low ligation of uterine artery	15	34.09%
6.	Internal iliac artery ligation	1	2.27%
7.	Hysterectomy	Nil	

DISCUSSION:

Placenta praevia is one of the dreadful pregnancy specific complications. Patients are often referred to tertiary care hospitals in haemorrhagic shock especially in cases of placenta praevia where the mode of delivery is essentially by caesarean section. Among the 44 cases of placenta praevia admitted in GGH, Kurnool there was no bleeding from placental bed in 31.81% (14) cases. Low ligation of uterine artery along with its descending branch was done in 34.09% (15) cases. Internal iliac artery ligation was performed in 1 case only. In remaining cases bleeding was controlled with applying pressure & packing (11.36%), suturing placental bed (9.09%), low ligation of uterine artery (15.9%). Hysterectomy was not required in any case.

CONCLUSIONS:

In cases of placenta praevia for arrest of bleeding from placental bed before going for internal iliac artery ligation & hysterectomy, bilateral uterine artery ligation & its descending can be successfully attempted after mobilising bladder well down. This is very simple, safe, can be rapidly performed & has no detrimental effect on subsequent menstrual & reproductive functions. Other methods which are time consuming can be reserved for cases where approach to these vessels is difficult eg. drawn up or adherent bladder.

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